

Highlights of Polio Fax Bulletin No. 1098 for Week 42 2019

I. Poliovirus Transmission

1. **Endemic countries (PAKISTAN & AFGHANISTAN):** Six new wild poliovirus cases reported this week, two from Afghanistan and four from Pakistan. Twelve new positive environmental samples were reported this week, six each from Afghanistan and Pakistan.

a. *Human samples:* Six new wild poliovirus cases reported this week. Total WPV1 cases in 2019 to date are 94 (18 from Afghanistan and 76 from Pakistan). This compares with 28 cases in 2018 in the same period (Afghanistan – 20 and Pakistan – 8).

- Afghanistan: Two new WPV1 cases were reported this week and their details are as follows:

- Case (1): The case was reported from the newly infected district Khogyani, Nangarhar province, with date of onset 18 September 2019. The case is a 156-month old male child. The child received reportedly 1 dose of OPV from routine and 7+ doses from supplementary immunization activities (SIAs).

- Case (2): The case was reported from the newly infected district Bermal, and newly infected province Paktika, with date of onset 15 September 2019. The case is a 21-month old female child. The child received reportedly 5 OPV doses all from SIAs and none from routine.

In 2019 to date, 18 WPV1 cases are reported. They include 8 cases from Uruzgan province, 5 cases from Hilmand province, 2 from Kandahar province and 1 each from Kunar, Nangarhar and Paktika provinces. The most recent case has onset of paralysis on 18 September 2019.

- Pakistan:

- Case (1): The case was reported from Lakki Marwat district, Khyber Pakhtunkhwa (KP) province, with date of onset 19 September 2019. The case is a 3-month old male child. The child received reportedly a total of 2 OPV doses both from SIAs and none from routine. The index case was identified as wild by a positive contact.

- Case (2): The case was reported from the newly infected district Harnai, Balochistan province, with date of onset 27 September 2019. The case is an 11-month old male child. The child received reportedly a total of 3 OPV doses out of which one was from routine and two from SIAs.

- Case (3): The case was reported from Lakki Marwat district, KP province, with date of onset 4 October 2019. The case is a 7-month old female child. The child did not receive any OPV doses neither from routine or SIAs. The index case was identified as wild by a positive contact.

- Case (4): The case was reported from Lakki Marwat, KP province, with date of onset 6 October 2019. The case is a 21-month old male child. The child received reportedly a total of 6 OPV doses out of which one was from routine and five from SIAs.

In 2019 to date, 76 WPV1 cases are reported from Pakistan. They include 45 from Khyber Pakhtunkhwa (KP) province, 11 from KP Tribal Districts (KPTD), 8

from Sindh province, 7 from Balochistan province and 5 from Punjab province. The most recent case has onset of paralysis on 6 October 2019.

Environmental samples: Twelve new WPV1 positive environmental samples were reported this week, 6 each from Pakistan and Afghanistan.

- Afghanistan: In 2019 to date, there are 42 positive environmental samples with most recent positive sample collected on 24 September 2019.
- Pakistan: In 2019 to date, there are 258 positive environmental samples with most recent positive sample collected on 2 October 2019.

2. Outbreak response countries

SOMALIA: No new cVDPV2 or cVDPV3 isolates from human or environmental samples were reported this week.

- In 2019 to date, Somalia has reported three cVDPV2 cases. The most recent reported case has date of onset of paralysis on 8 May 2019.
- In addition, cVDPV2 was isolated from healthy child sample collected during community sampling on 25 May 2019. aVDPV2 was isolated from an environmental sample on 3 February 2019.
- In 2018: Somalia has reported a total of 12 cases due to cVDPVs, which include 5 due to cVDPV2, 6 due to cVDPV3 and 1 due to co-infection of cVDPV2 and cVDPV3. The last cVDPV3 was isolated from a sewage sample from Mogadishu collected on 23 August 2018.

II. Surveillance performance indicators

In 2019, 20 of 22 member states are meeting the global target of both key surveillance indicators, namely non polio AFP rate of 2 per 100,000 children aged below 15 years and percent AFP cases with adequate specimen 80% and above.

- Djibouti has a non-polio AFP rate of 1.1 and percentage of AFP cases with adequate stool specimens of 66.7%
- Tunisia has a percentage of AFP cases with adequate stool specimens of 71.7%
- In Yemen there are AFP cases pending final classification more than 90 days due to delayed lab results because of delay shipment of specimens to reference polio laboratories.

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Table 1: Acute Flaccid Paralysis (AFP) cases by week of onset

Country	Reported AFP cases by week of onset - Week (42/19) / Ending on : 20/10/2019														
	Total AFP 2017	Total AFP 2018	Total AFP to date, 2019	W31 04 Aug 19	W32 11 Aug 19	W33 18 Aug 19	W34 25 Aug 19	W35 01 Sep 19	W36 08 Sep 19	W37 15 Sep 19	W38 22 Sep 19	W39 29 Sep 19	W40 06 Oct 19	W41 13 Oct 19	W42 20 Oct 19
Afghanistan	3094	3378	2988	79	38	76	81	60	71	80	73	53	59	57	8
Bahrain	18	35	12	0	0	0	0	0	0	0	0	1	0	0	0
Djibouti	4	0	3	0	1	0	0	1	0	0	0	0	0	0	0
Egypt	1242	1246	1010	15	7	23	29	25	16	28	33	27	21	7	0
Iran	820	896	737	15	25	22	17	14	18	20	22	2	3	0	0
Iraq	699	1023	850	12	6	15	28	19	21	21	21	23	23	6	
Jordan ****	116	115	96	0	0	2	2	0	2	1	4	0	1		
Kuwait	69	72	34	0	0	0	0	2	3	0	2	1	1		
Lebanon ****	75	89	64	2	1	0	1	0	2	0	1	1	2		
Libya	88	122	76	1	1	3	9	3	1	2	2	4	2	2	
Morocco	143	212	165	2	1	0	4	4	5	3	8	4	3	1	
Oman	40	28	18	0	0	1	1	0	1	0	0	1	1	1	0
Pakistan	10319	12276	11278	267	247	288	342	293	306	313	296	263	222	148	3
Palestine ****	43	44	48	1	0	1	1	1	1	1	4	0	1	1	0
Qatar	18	10	6	0	1	0	0	0	1	0	0	0	1	0	0
Saudi Arabia	276	242	157	2	1	1	5	1	0	0	0	0	0		
Somalia	345	353	294	4	7	5	7	6	5	5	16	6	4	4	0
Sudan	570	579	441	8	4	10	18	16	15	12	12	16	19	4	
Syria ****	362	362	286	5	2	3	5	4	8	6	7	2	5	2	
Tunisia	67	68	60	1	2	2	0	2	3	1	0	0	0		
U.A.E	58	40	30	1	0	1	1	2	0	0	0	1	1	0	0
Yemen	713	730	592	16	8	12	10	12	12	20	8	17	13	2	
Total EMR	19179	21920	19245	431	352	465	561	465	491	513	509	422	382	235	11

No data = No report received

Table 2: Confirmed polio cases by month of onset

Country	Total year 2017	Total year 2018	20/10		Confirmed polio cases by month of onset											
			2018	2019	November 2018	December 2018	January 2019	February 2019	March 2019	April 2019	May 2019	June 2019	July 2019	August 2019	September 2019	October 2019
Afghanistan	14	21	20	18	1	0	2	1	3	1	5	1	2	1	2	
Bahrain	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Djibouti	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Egypt	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Iran	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Iraq	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Jordan ****	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Kuwait	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Lebanon ****	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Libya	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Morocco	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Oman	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Pakistan	8	12	8	76	0	4	4	2	0	11	11	16	12	14	4	2
Palestine ****	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Qatar	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Saudi Arabia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Somalia	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Sudan	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Syria ****	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Tunisia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
U.A.E	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Yemen	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Total EMR	22	33	28	94	1	4	6	3	3	12	16	17	14	15	6	2

**** UNRWA cases are included with those of country of residence

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Table 3: Investigation of AFP cases with paralysis onset in 2018 & 2019 up to Week (42/19) / Ending on : 20/10/2019

COUNTRY	2018												2019												Latest line List Date
	AFP									Specimen	Wild cases ****		AFP									Specimen	Wild cases ****		
	Total AFP cases onset 2018	Case classification					Non polio AFP rate **	AFP cases pending classification > 90 days from onset of paralysis	AFP cases pending classification and lab > 90 days from onset of paralysis	% with *** adequate specimens	Wild P1 Poliovirus	Wild P3 Poliovirus	Total AFP cases onset 2019	Case classification					Annualized Non polio AFP rate **	AFP cases pending classification > 90 days from onset of paralysis	AFP cases pending classification and lab > 90 days from onset of paralysis	% with *** adequate specimens	Wild P1 Poliovirus	Wild P3 Poliovirus	
		Total Confirmed Polio Cases *	Polio Compatible	Pending Classification	Discarded (non polio AFP)	VDPV								Total Confirmed Polio Cases *	Polio Compatible	Pending Classification	Discarded (non polio AFP)	VDPV							
Afghanistan	3378	21	0	0	3357	0	16.6	0	0	93.8	21	0	2988	18	0	229	2741	0	18.3	42	7	94.4	18	0	20/10/2019
Bahrain	35	0	0	0	35	0	12.1	0	0	97.1	0	0	12	0	0	1	11	0	5.2	0	0	100.0	0	0	20/10/2019
Djibouti	0	0	0	0	0	0	0.0	0	0		0	0	3	0	0	3	0	0	1.0	1	0	66.7	0	0	13/10/2019
Egypt	1246	0	0	0	1245	1	3.2	0	0	93.2	0	0	1010	0	0	90	920	0	3.3	7	0	88.7	0	0	20/10/2019
Iran	896	0	0	0	894	2	4.6	0	0	97.0	0	0	737	0	0	16	720	1	4.8	0	0	96.6	0	0	20/10/2019
Iraq	1023	0	0	0	1023	0	6.7	0	0	89.9	0	0	850	0	0	76	774	0	6.9	14	0	94.6	0	0	18/10/2019
Jordan	115	0	0	0	115	0	4.1	0	0	100.0	0	0	96	0	0	3	93	0	4.3	0	0	100.0	0	0	10/10/2019
Kuwait	72	0	0	0	72	0	8.1	0	0	90.3	0	0	34	0	0	3	31	0	4.8	0	0	82.4	0	0	10/10/2019
Lebanon	89	0	0	0	89	0	4.8	0	0	96.6	0	0	64	0	0	11	53	0	4.3	7	0	84.4	0	0	11/10/2019
Libya	122	0	0	0	122	0	4.9	0	0	96.7	0	0	76	0	0	10	66	0	3.8	1	0	98.7	0	0	19/10/2019
Morocco	212	0	0	0	212	0	2.4	0	0	77.8	0	0	165	0	0	59	106	0	2.3	30	7	80.0	0	0	13/10/2019
Oman	28	0	0	0	28	0	3.2	0	0	92.9	0	0	18	0	0	3	15	0	2.4	0	0	88.9	0	0	20/10/2019
Pakistan	12276	12	1	0	12263	0	15.7	0	0	87.0	12	0	11278	76	0	893	10309	0	17.9	168	1	88.0	76	0	20/10/2019
Palestine	44	0	0	0	44	0	2.3	0	0	90.9	0	0	48	0	0	11	37	0	3.2	0	0	97.9	0	0	20/10/2019
Qatar	10	0	0	0	10	0	2.8	0	0	100.0	0	0	6	0	0	4	2	0	2.1	1	0	83.3	0	0	20/10/2019
Saudi Arabia	242	0	0	0	242	0	3.0	0	0	95.9	0	0	157	0	0	32	125	0	2.4	21	8	89.8	0	0	10/10/2019
Somalia	353	0	0	0	341	12	5.5	0	0	97.7	0	0	294	0	0	35	256	3	5.8	3	3	95.6	0	0	20/10/2019
Sudan	579	0	0	0	579	0	3.2	0	0	97.2	0	0	441	0	0	24	417	0	3.1	0	0	98.0	0	0	17/10/2019
Syria	362	0	0	0	362	0	4.7	0	0	87.0	0	0	286	0	0	15	271	0	4.6	2	0	86.0	0	0	19/10/2019
Tunisia	68	0	0	0	68	0	2.6	0	0	80.9	0	0	60	0	0	0	59	1	2.7	0	0	71.7	0	0	10/10/2019
U.A.E	40	0	0	0	40	0	3.2	0	0	97.5	0	0	30	0	0	8	22	0	3.0	4	0	86.7	0	0	20/10/2019
Yemen	730	0	0	140	590	0	5.2	140	129	91.6	0	0	592	0	0	466	126	0	5.2	328	302	89.7	0	0	19/10/2019
EMR	21920	33	1	140	21731	15	8.7	140	129	89.8	33	0	19245	94	0	1992	17154	5	9.6	629	328	90.0	94	0	
2017	19179	22	3	72	19006	76	7.7	72	58	88.9	22	0													

* Confirmed polio cases refer to wild isolation from AFP cases or from contacts of negative index AFP cases

** Non-polio AFP per 100,000 children <15 years

*** Adequate here refers to two stool specimens collected at least 24 hours apart, within 14 days of paralysis onset and specimens received in the lab in Good Condition

**** AFP cases co infected with P1 and P3 are counted separately as wild isolates

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Table 4 (a): Lab results of contacts' samples in EMR, 2018 - 2019

COUNTRY	2018						2019					
	# OF CONTACTS	LAB RESULTS					# OF CONTACTS	LAB RESULTS				
		WILD	VDPV	SL	NPEV	PENDING		WILD	VDPV	SL	NPEV	PENDING
AFG	1009	4	0	52	217	0	902	8	0	38	162	14
BAH	2	0	0	0	0	0	0	0	0	0	0	0
DJI	0	0	0	0	0	0	0	0	0	0	0	0
EGY	495	0	0	11	58	17	390	0	0	7	44	18
IRN	145	0	0	3	6	0	129	0	0	4	6	0
IRQ	811	0	0	22	93	9	445	0	0	7	14	29
JOR	0	0	0	0	0	0	0	0	0	0	0	0
KUW	0	0	0	0	0	0	0	0	0	0	0	0
LEB	229	0	0	3	16	22	24	0	0	0	3	2
LIB	1	0	0	0	0	0	3	0	0	0	0	0
MOR	161	0	0	0	9	9	59	0	0	3	1	17
OMA	70	0	0	2	16	0	43	0	0	2	16	0
PAK	4200	3	0	207	882	0	4183	11	0	162	750	188
PAL	0	0	0	0	0	0	0	0	0	0	0	0
QAT	0	0	0	0	0	0	0	0	0	0	0	0
SAA	5	0	0	0	0	5	0	0	0	0	0	0
SOM	1052	0	10	49	133	0	888	0	1	37	90	105
SUD	350	0	0	3	24	88	297	0	0	0	25	59
SYR	670	0	0	8	17	0	622	0	0	10	35	15
TUN	1	0	0	0	0	0	18	0	0	0	2	0
UAE	0	0	0	0	0	0	0	0	0	0	0	0
YEM	1559	0	0	0	0	636	364	0	0	0	0	163
EMR	10760	7	10	360	1471	786	8367	19	1	270	1148	610

Table 4 (B): Most recent wild contacts in EMRO, 2018 - 2019

Year	Country	Data	
		Count of wild contacts	Date of Most Recent stool collection
2019	Afghanistan	8	17/Aug/19
	Pakistan	11	4/Oct/19
2019 Total		19	4/Oct/19
2018	Afghanistan	4	7/Aug/18
	Pakistan	3	12/Oct/18
2018 Total		7	12/Oct/18

Table 4 (C): Number and distribution by district of -ve index AFP cases identified as wild positive by contact in EMR, 2018-2019

YEAR	COUNTRY	PROVINCE	DISTRICT	COUNT	First case	Last case
2019	AFG	HILMAND	MUSAQALAH	1	5-Jun-19	5-Jun-19
		HILMAND	SANGIN	1	6-Mar-19	6-Mar-19
	PAK	SINDH	KHIORANGI	1	28-Aug-19	28-Aug-19
		BALOCHSITAN	KILLABDULLAH	1	2-Jul-19	2-Jul-19
		KHYBER PAKHTUNKHWA (KP)	LAKKIMRWT	3	27-May-19	4-Oct-19
		KHYBER PAKHTUNKHWA (KP)	TORGHAR	1	25-May-19	25-May-19
2019 Total				8	06-Mar-19	04-Oct-19
2018	AFG	NANGARHAR	PACHIERAGAM	1	17-Jul-18	17-Jul-18
		URUZGAN	SHAHID-E-HASSA	1	8-Jul-18	8-Jul-18
	PAK	KHYBER PAKHTUNKHWA TRIBAL DISTRICTS (KPTD)	BAJOUR	1	1-Sep-18	1-Sep-18
		BALOCHSITAN	DUKKI	1	15-Apr-18	15-Apr-18
2018 Total				4	15-Apr-18	01-Sep-18

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Table 5: Laboratory investigation of AFP cases with paralysis onset in 2019 up to Week (42/2019) / Ending on : (20/10/2019)

Country	Polio laboratories ITD / Nucleotide Sequencing (Nucleotide Sequencing performed by EGY, PAK, TUN, CDC and RIVM laboratories)	AFP cases with specimens	Preliminary virus isolation results of AFP cases						Poliovirus intratypic differentiation results #										Indicators				Latest report Date			
			Referred for ITD		NPEV only	Negative	Pending		Type 1			Type 2			Type 3			Discordant pending sequence	NPEV by PCR	Non-EV	Pending ITD	% specimens positive for NPEV*		% AFP cases with culture results within 14 days	% AFP cases with ITD results within 7 days	% AFP cases with ITD results within 45 days of onset**
			L20B+	L20B+/NPEV			received < / = 14 days	received > 14 days ago	Wild	Sabin	VDPV	Wild	Sabin	VDPV	Wild	Sabin	VDPV									
Afghanistan	RRL Pakistan	2921	219	22	456	2134	91		15 *	167						155		1	1	1	2	14%	95%	100%	98%	20/10/2019
Bahrain	NPL Oman / CDC	11					11																			14/10/2019
Djibouti	NPL Kenya / CDC	3						3																		13/10/2019
Egypt***	RRL Egypt	999	35	6	95	812	47	4		15					20			9	3			10%	96%	100%	99%	17/10/2019
Iran	NPL Iran / CDC	737	11		17	679		30		2	1				8							3%	100%	100%	99%	05/10/2019
Iraq	RRL Egypt	919	12		106	670	50	81		5					9							12%	100%	100%	69%	17/10/2019
Jordan	NPL Jordan / RRL EGYPT	96			13	81	1	2														14%	100%			13/10/2019
Kuwait	RRL Kuwait / RIVM	39			2	33		4														6%	89%		100%	17/10/2019
Lebanon	NPL Jordan / RRL EGYPT	58	1		6	51								1								10%	100%	100%	0%	13/10/2019
Libya	RRL Tunisia / RIVM	69			1	66		2														1%	99%		99%	04/10/2019
Morocco	NPL Morocco / RRL Tunisia	159	1		3	146	9							1								2%	100%	100%	96%	18/10/2019
Oman	NPL Oman / CDC	17			3	12	1	1														25%	100%		100%	14/10/2019
Pakistan	RRL Pakistan	11003	408	43	1851	8228	462	4	68 *	238					233		5	1	9			15%	97%	99%	97%	20/10/2019
Palestine & UNRWA		48			6	40	1	1														13%	33%		100%	20/10/2019
Qatar	NPL Oman / CDC	5				5																0%	100%		100%	14/10/2019
Saudi Arabia	NPL Saudi Arabia / CDC	184	4		1	170	7	2		6					4							1%	95%	100%	100%	21/10/2019
Somalia	NPL Kenya / CDC	294	20		52	189	5	28		6		8	3		6				2			20%	14%		98%	20/10/2019
Sudan	NPL Sudan / RRL Egypt	438	6		60	349	20	3		5					2							12%	67%	100%	63%	20/10/2019
Syria	NPL Syria / RRL Egypt	272	12		16	234	4	6		5					9							7%	100%	100%	54%	10/10/2019
Tunisia	RRL Tunisia	55			3	52																7%	100%		98%	04/10/2019
U.A.E	NPL Oman / CDC	25			3	22																12%	100%		44%	14/10/2019
Yemen	NPL Kenya / CDC																									19/10/2019
Total EMR 2019		18352	729	71	2694	13973	709	171	83	443	1	8	3	448		1	15	5	13			13%	95%	99%	97%	
Total EMR 2018		20746	902	90	3513	16220		17	29	590	3	6	6 #	628	7 #		22	1	3			14%	92%	99%	97%	

* Specimens from all sources including non-AFP cases, excluding environmental samples

* Notification received from National EOC AFG/PAK of 1 new WPV1 case from AFG & 4 from PAK that will show in laboratory table in next week bulletin

Somalia in 2018 has a total of 12 cVDPV cases (5 cVDPV2, 6 cVDPV3 & 1 coinfection cVDPV2/cVDPV3)

** This indicator reflects surveillance and laboratory activities

Table 6: Environmental isolate by year and type

Country	Status	2015	2016	2017	2018	2019
AFG	NEGATIVE	129	183	274	253	145
	PENDING					4
	WILD	20	2	42	83	42
AFG Total		149	185	316	336	191
EGY	NEGATIVE	493	528	522	540	559
	PENDING	2				33
	VDPV2	3	1			
EGY Total		498	529	522	540	592
JOR	NEGATIVE		2	32	36	26
	PENDING					1
JOR Total			2	32	36	27
LEB	NEGATIVE		4	27	45	29
	PENDING					7
LEB Total			4	27	45	36
PAK	NEGATIVE	347	462	523	534	295
	PENDING					44
	WILD	79	59	105	139	258
	WILD & VDPV2 VDPV2	5 8	3 5	1 4		
PAK Total	439	529	633	673	597	
SOM	NEGATIVE			34	181	39
	PENDING					4
	VDPV2			2	20	1
	VDPV3					12
SOM Total				36	213	44
SYR	NEGATIVE		4	102	124	
	PENDING					16
SYR Total			4	102	140	
IRN	NEGATIVE		6	54	55	
	WILD					3
IRN Total			6	54	58	
KUW	NEGATIVE				3	
	PENDING					5
KUW Total					3	5
SUD	NEGATIVE				15	35
	PENDING					10
SUD Total					15	45
Grand Total		1086	1249	1576	2017	1735

Table 7: Environmental Wild/DPV isolate by site

Country	COUNTRY	Status	PROVINCE	DISTRICT	Count	First date	Last date			
2018	AFG	WILD	HILMAND	LASHKARGAH	12	8/Jan	26/Dec			
				HERAT	1	25/Jun	25/Jun			
				KABUL	3	26/Feb	26/Jun			
				KANDAHAR	42	8/Jan	26/Dec			
				KHOST	1	25/Sep	25/Sep			
				KUNAR	2	24/Apr	25/Sep			
				BEHSUD	3	28/Jan	25/Oct			
				JALALABAD	19	27/Jan	26/Dec			
				AFG Total	83	8/Jan	26/Dec			
				PAK	WILD	BALOCHISTAN	LORALAI	2	17/Mar	17/Aug
	PISHIN	1	2/Dec				2/Dec			
	QUETTA	13	13/Feb				20/Dec			
	KABDULAH	8	1/Jan				15/Dec			
	ISLAMABAD	7	10/Jan				10/Nov			
	PUNJAB	12	11/Jun				18/Dec			
	LAHORE	15	10/Jan				14/Dec			
	DGKHAN	2	12/Feb				12/Sep			
	SINDH	1	9/Feb				9/Feb			
	JACOBABAD	3	12/Feb				12/Sep			
	SOM	VDPV2	BANADIR	HAMAR WEYN	11	4/Jan	20/Sep			
HODAN				2	22/Feb	4/Oct				
WABERI				7	1/Mar	13/Oct				
HAMAR WEYN				6	11/Feb	5/Apr				
HODAN				1	1/Feb	1/Feb				
WABERI				5	8/Mar	23/Aug				
SOM Total				32	4/Jan	11/Oct				
2018 Total							254	1/Jan	27/Dec	
2019				AFG	WILD	HILMAND	LASHKARGAH	7	23/Feb	24/Sep
							NAHR-E-SARAJ	6	6/Jan	24/Sep
	KANDAHAR	23	6/Jan				24/Sep			
	JALALABAD	6	26/Jan				27/Aug			
	AFG Total	42	6/Jan	24/Sep						
	PAK	WILD	BALOCHISTAN	KHUZDAR	1	20/Mar	20/Mar			
				LORALAI	1	17/Mar	17/Mar			
				PISHIN	4	2/Feb	2/Sep			
				QUETTA	29	1/Jan	1/Oct			
				DBUGTI	2	19/Aug	19/Sep			
				KABDULAH	10	1/Jan	1/Sep			
				ISLAMABAD	3	12/Apr	21/Aug			
				PUNJAB	4	3/Jan	3/Sep			
				LAHORE	44	5/Jan	2/Oct			
				MULTAN	5	18/Feb	18/Sep			
				RAWALPINDI	9	10/Jan	22/Jul			
				BAHAWALPUR	1	28/Aug	28/Aug			
				DGKHAN	2	8/Apr	12/Sep			
				SINDH	4	2/May	11/Sep			
				HYDERABAD	9	24/Jan	12/Sep			
JACOBABAD				4	24/Jan	5/Sep				
KAMBAR	5	7/Mar	17/Sep							
KHIBALDIA	7	2/Jan	12/Sep							
KHIGADAP	23	8/Jan	19/Sep							
KHIGQBAL	9	11/Apr	23/Sep							
KHIKORANGI	8	18/Feb	24/Sep							
KHILANDHI	7	19/Feb	25/Sep							
KHISITE	9	3/Jan	11/Sep							
SUKKUR	9	23/Jan	14/Sep							
KHILIAQAT	7	7/Feb	13/Sep							
KHISADDAR	9	7/Jan	17/Sep							
KP TRIBAL DISTRICTS	5	22/Jan	28/May							
WAZIR-S	1	15/Jan	15/Jan							
KHYBER PAKHTUNKHWA	9	28/Jan	27/Sep							
BANNU	4	8/Jan	11/Jun							
KOHAT	1	27/Feb	27/Feb							
MARDAN	4	16/Mar	15/Jun							
PESHAWAR	9	11/Jan	18/Sep							
PAK Total	258	1/Jan	2/Oct							
SOM	VDPV2	BANADIR	HODAN	1	3/Feb	3/Feb				
SOM Total				1	3/Feb	3/Feb				
IRN	WILD	S & B	IRANSHAHR	3	22/Apr	20/May				
IRN Total				3	22/Apr	20/May				
2019 Total				304	1/Jan	2/Oct				

Figure 1: Non Polio AFP Rate and Wild Virus in EMR 01/01/2019 - 20/10/2019

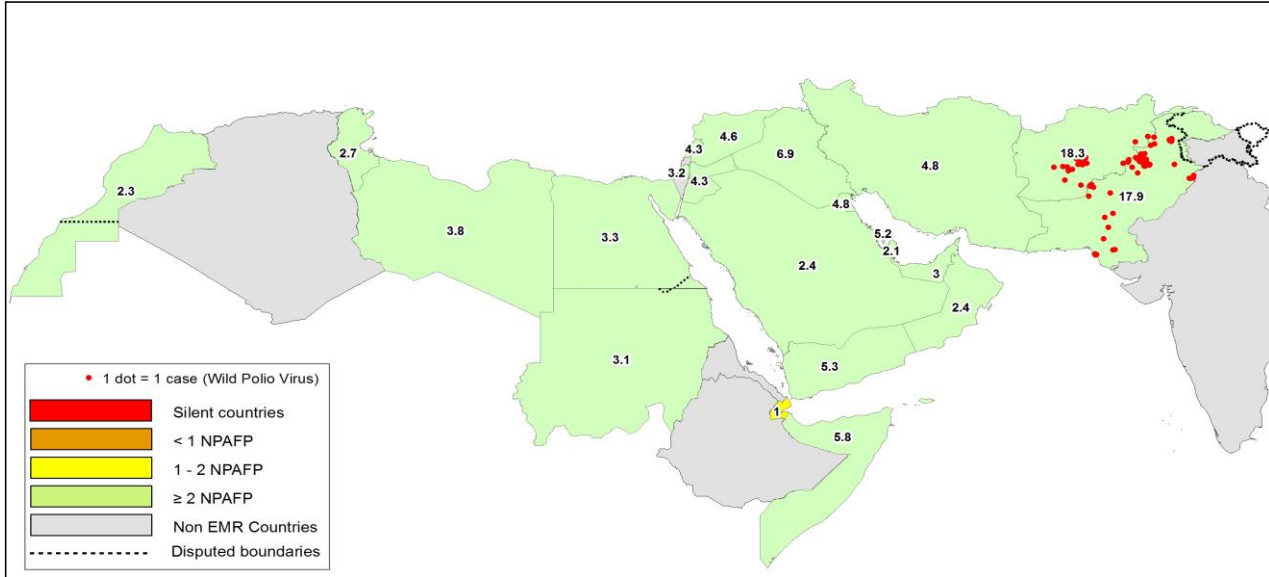


Figure 2: Percent of AFP cases with Adequate Samples & Compatible Cases in EMR 01/01/2019 - 20/10/2019

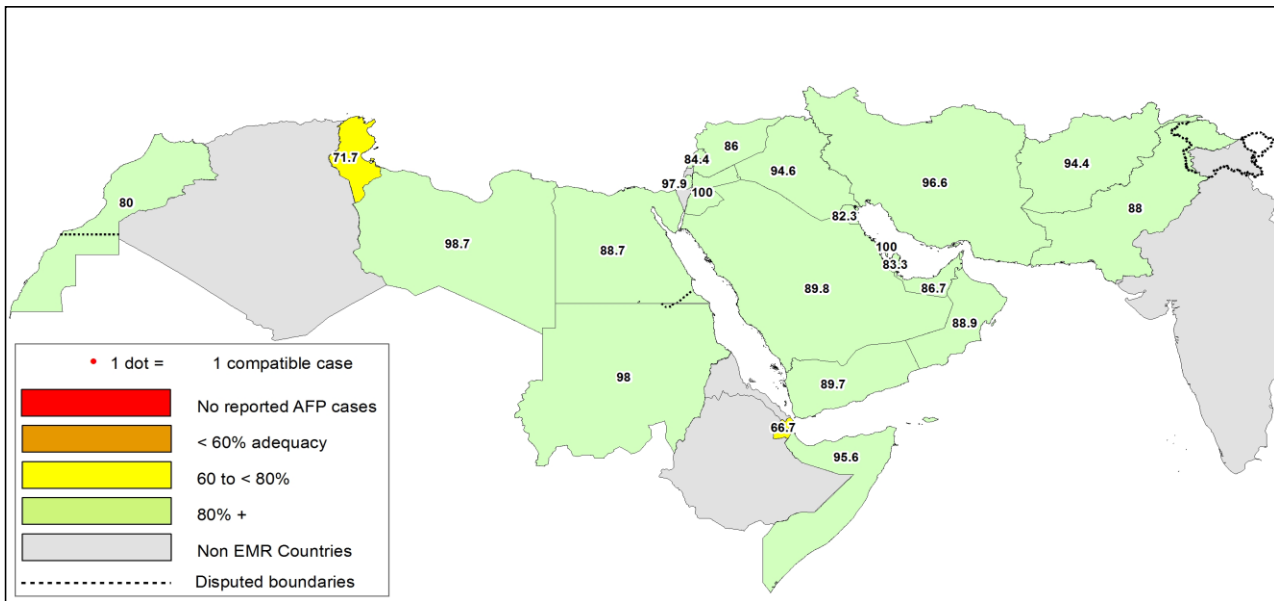


Table 8: Wild polio cases by country and date of onset of paralysis in EMR, 2018 - 2019

Year	COUNTRY	Count	First Case	Last Case
2018	AFG	21	1-Jan-18	6-Nov-18
	PAK	12	8-Mar-18	31-Dec-18
2018 Total		33	1-Jan-18	31-Dec-18
2019	AFG	18	4-Jan-19	18-Sep-19
	PAK	76	15-Jan-19	6-Oct-19
2019 Total		94	4-Jan-19	6-Oct-19

Last reported wild Polio P3 from Pakistan with date of onset 18/04/2012

Figure 3: Non Polio AFP rate by Province in Afghanistan & by District in Pakistan 01/01/2019 - 20/10/2019

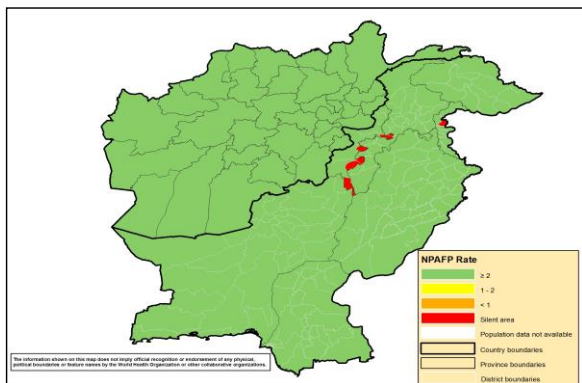


Figure 4: Percent of AFP cases with Adequate Samples in Afghanistan by Province & Pakistan by District 01/01/2019 - 20/10/2019

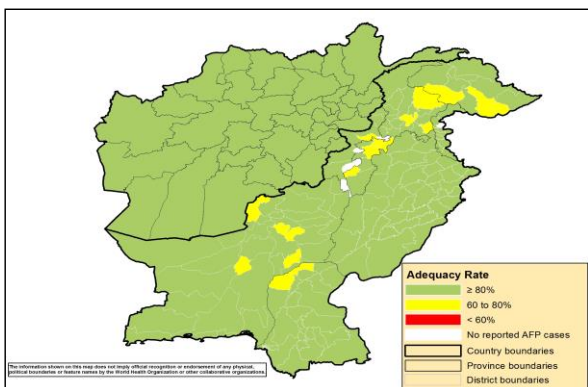
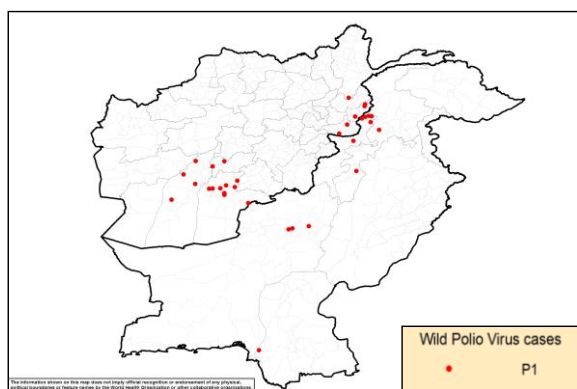
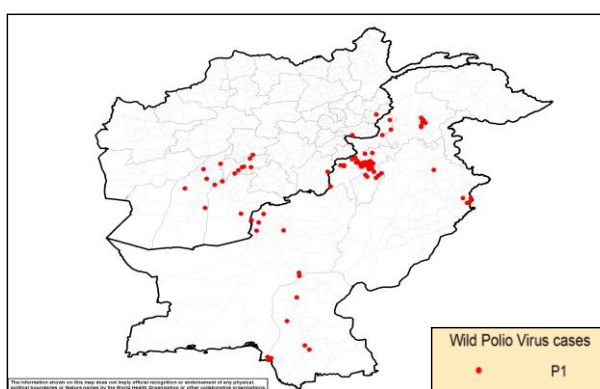


Figure 5: Wild Virus Cases by Type & District in Afghanistan & Pakistan

5(a) 01/01/2018 - 31/12/2018



5(b) 01/01/2019 - 20/10/2019



World Health Organization – Regional Office for Eastern Mediterranean

AFP SURVEILLANCE

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Table 9: Wild Polio cases by district and date of onset of paralysis, Afghanistan 2018-2019

ONSETYR	PROVINCE	DISTRICT	Count	First case	Last case
2018	HILMAND	NAWZAD	3	1-Sep-18	6-Nov-18
		NAD-E-ALI	1	1-Jun-18	1-Jun-18
	URUZGAN	SHAHID-E-HASSAS	2	8-Jul-18	9-Oct-18
	NURISTAN	PORUNS	1	26-Sep-18	26-Sep-18
	KANDAHAR	MAYWAND	1	24-Sep-18	24-Sep-18
		KANDAHAR	2	11-Aug-18	27-Aug-18
		ARGHANDAB (K)	1	17-Jul-18	17-Jul-18
		SHAHWALIKOT	3	5-Jan-18	27-Apr-18
		KHAKREZ	1	25-Feb-18	25-Feb-18
	NANGARHAR	SPINBOLDAK	1	6-Jan-18	6-Jan-18
		PACHIERAGAM	1	17-Jul-18	17-Jul-18
	KUNAR	KAMA	1	1-Jan-18	1-Jan-18
		CHAWKAY	1	22-Jun-18	22-Jun-18
		GHAZIABAD	2	14-Feb-18	3-Mar-18
2018 Total			21	1-Jan-18	6-Nov-18
2019	NANGARHAR	KHOGYANI	1	18-Sep-19	18-Sep-19
		PAKTIKA	1	15-Sep-19	15-Sep-19
	URUZGAN	TIRINKOT	4	19-May-19	2-Aug-19
		CHORA	3	20-Mar-19	23-Jul-19
		SHAHID-E-HASSAS	1	25-Feb-19	25-Feb-19
	HILMAND	GARMSER	1	26-May-19	26-May-19
		MUSAQALAH	1	5-May-19	5-May-19
		NAWZAD	1	3-Apr-19	3-Apr-19
		WASHER	1	23-Mar-19	23-Mar-19
		SANGIN	1	6-Mar-19	6-Mar-19
	KUNAR	WATAPUR	1	8-May-19	8-May-19
	KANDAHAR	GHORAK	1	12-Jan-19	12-Jan-19
		SPINBOLDAK	1	4-Jan-19	4-Jan-19
2019 Total			18	4-Jan-19	18-Sep-19

Table 10: Wild Polio cases by district and date of onset of paralysis, Pakistan 2018-2019

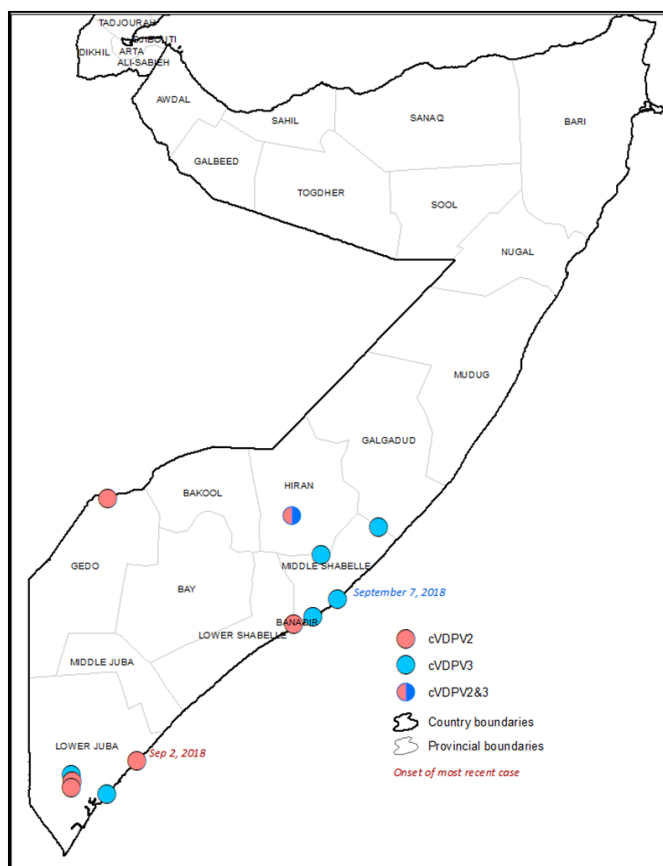
ONSETYR	PROVINCE	DISTRICT	Count	First case	Last case
2018	KP TRIBAL DISTRICTS	BAJOUR	5	1-Sep-18	31-Dec-18
		KHYBER	1	25-Sep-18	25-Sep-18
	KHYBER PAKHTUNKHWA	LAKKIMRWT	1	16-Dec-18	16-Dec-18
		CHARSADA	1	1-Aug-18	1-Aug-18
	SINDH	KHIGADAP	1	22-Sep-18	22-Sep-18
	BALUCHISTAN	DUKKI	3	8-Mar-18	18-May-18
2018 Total			12	8-Mar-18	31-Dec-18
2019	KHYBER PAKHTUNKHWA	LAKKIMRWT	10	27-May-19	6-Oct-19
		TORGHAR	7	25-May-19	13-Sep-19
		BANNU	23	15-Jan-19	19-Aug-19
		HANGU	2	20-Jan-19	28-Jul-19
		CHARSADA	1	21-Jul-19	21-Jul-19
		SHANGLA	1	18-May-19	18-May-19
	BALUCHISTAN	DIKHAN	1	5-May-19	5-May-19
		HARNAI	1	27-Sep-19	27-Sep-19
		JAFARABAD	2	28-May-19	13-Sep-19
		KABDULAH	3	9-Jun-19	8-Aug-19
	SINDH	QUETTA	1	6-Jul-19	6-Jul-19
		KHIORANGI	2	20-Aug-19	26-Aug-19
		JAMSHORO	1	23-Aug-19	23-Aug-19
		HYDERABAD	2	20-Jul-19	5-Aug-19
		KHIGIQBAL	1	29-Apr-19	29-Apr-19
		LARKANA	1	17-Apr-19	17-Apr-19
		KHILAYARI	1	25-Feb-19	25-Feb-19
	KP TRIBAL DISTRICTS	WAZIR-S	1	20-Aug-19	20-Aug-19
		WAZIR-N	8	4-Apr-19	21-Jul-19
		KHYBER	1	14-Feb-19	14-Feb-19
BAJOUR		1	18-Jan-19	18-Jan-19	
PUNJAB	LAHORE	4	20-Jan-19	22-Jun-19	
	JHELUM	1	21-Jun-19	21-Jun-19	
2019 Total			76	15-Jan-19	6-Oct-19

Table 11: Circulating VDPV cases and date of onset of paralysis in EMR countries by districts 2018-2019

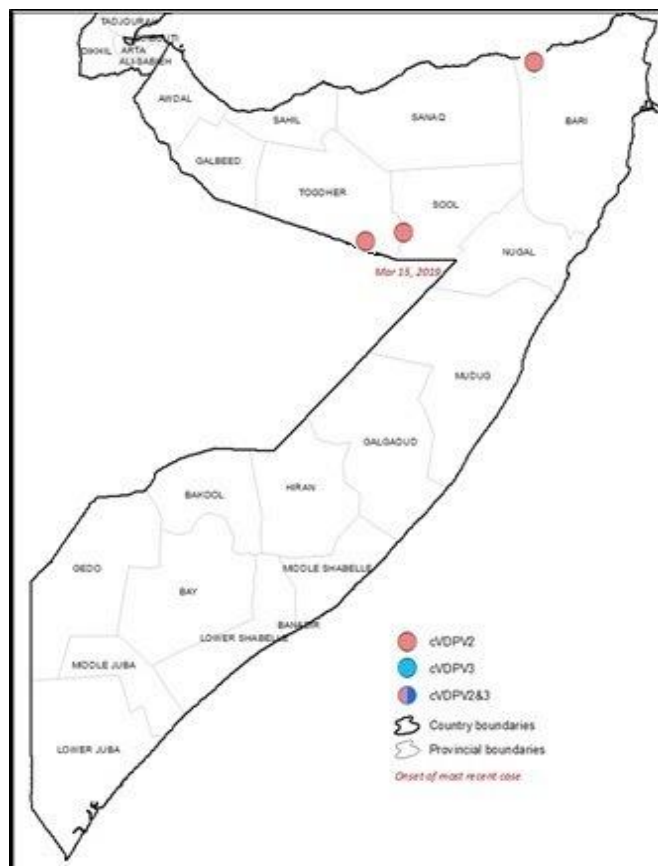
COUNTRY	YEAR	PROVINCE	DISTRICT	cVDPV2			cVDPV3			
				Count	First Case	Last Case	Count	First Case	Last Case	
SOM	2019	BARI	BOSSASO	1	08-May-19	08-May-19				
		TOGDHER	BUHODLE	1	21-Apr-19	21-Apr-19				
		SOOL	LAS ANOD	1	15-Mar-19	15-Mar-19				
	Total 2019				3	15-Mar-19	8-May-19			
	2018	LOWER JUBA	JAMAAME WEST		1	02-Sep-18	02-Sep-18			
			KISMAYO		2	29-Jul-18	30-Jul-18	2	4-Jul-18	27-Jul-18
		MIDDLE SHABELLE	RUNINGOD					1	07-Sep-18	07-Sep-18
			MAHADAY					1	29-Jun-18	29-Jun-18
			WARSHEIKH					2	16-May-18	23-May-18
		BANADIR	DANYILE		1	10-Jul-18	10-Jul-18			
	HIRAN	BULO BURTI		1	11-May-18	11-May-18	1	11-May-18	11-May-18	
GEDO	DOLO		1	26-May-18	26-May-18					
Total 2018				6	11-May-18	2-Sep-18	7	11-May-18	7-Sep-18	

Figure 6: Somalia cVDPV cases by type and district

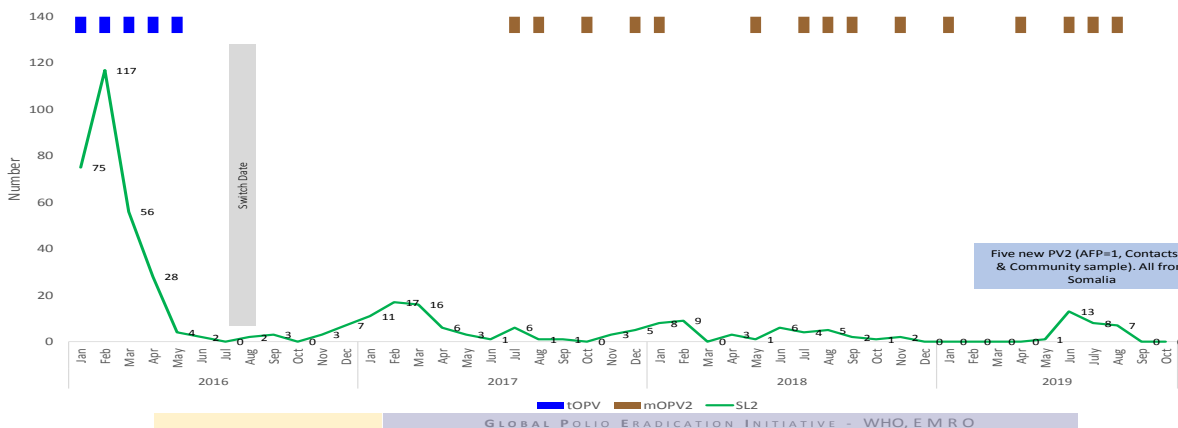
6(a) 01/01/2018 - 31/12/2018



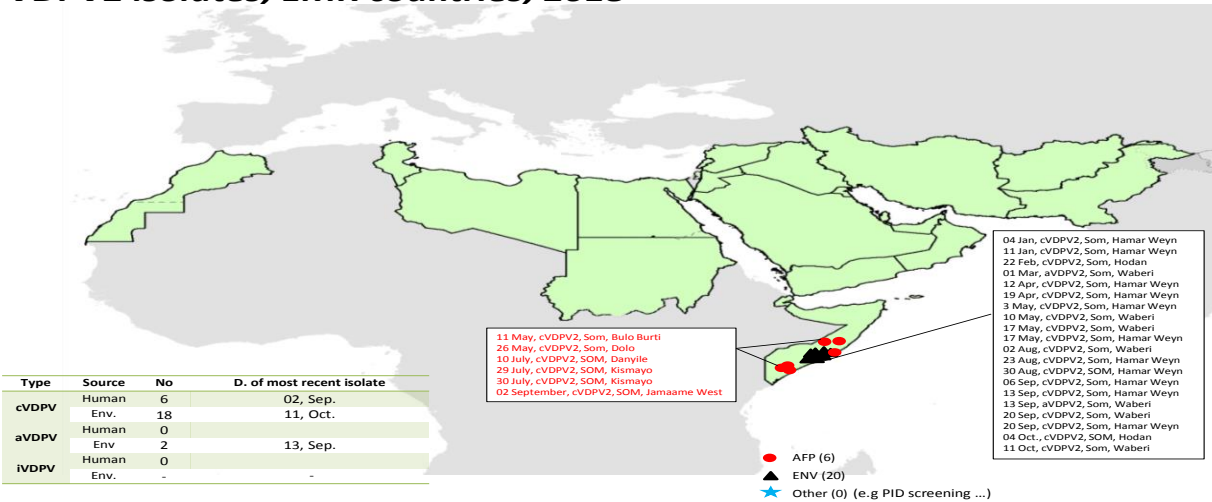
6(b) 01/01/2019 - 20/10/2019



Sabin like type-2 poliovirus isolates (H&E) and vaccine types used during SIAs, EMRO, 2016 to 2019



VDPV2 isolates, EMR countries, 2018



VDPV2 isolates, EMR countries, 2019

